

WHAT IS CLAIMED IS:

1 1. For use in a radio access network comprising a serving radio network control
2 node and a drift radio network control node, a method comprising:

3 determining that a target cell controlled by the drift radio network control node
4 should be prepared for handover with respect to a user equipment unit, the target cell
5 being neighbored by a set of neighboring cells, the set of neighboring cells including a
6 first subset of neighboring cells and a second subset of neighboring cells, a handover
7 involving the user equipment unit being permitted for a cell of the first subset but not
8 for a cell of the second subset;

9 transmitting to the user equipment unit a message including a filtered list of
10 cells, the filtered list of cells including the first subset but not the second subset.

1 2. The method of claim 1, wherein the filtered list of cells comprises cells for
2 whose channels the user equipment unit is to perform measurements.

1 3. The method of claim 1, further comprising:
2 determining an allowed area(s) for the user equipment unit;
3 preparing the filtered list of cells using the allowed area(s).

1 4. The method of claim 3, further comprising:
2 performing the step of determining the allowed area(s) for the user equipment
3 unit at the drift radio network control node;
4 performing the step of preparing the filtered list of cells using the allowed
5 area(s) at the drift radio network control node.

1 5. The method of claim 4, further comprising:
2 transmitting to the drift radio network control node an identification of the target
3 cell and an identification of the user equipment unit; and
4 the drift radio network control node transmitting to the serving radio network
5 control node the filtered list.

1 6. The method of claim 4, wherein the identification of the user equipment unit
2 is the International Mobile Subscriber Identifier (IMSI) of the user equipment unit.

1 7. The method of claim 5, further comprising:
2 transmitting to the drift radio network control node an identification of the target
3 cell and an identification of the user equipment unit in a RADIO LINK SETUP
4 REQUEST message;
5 transmitting to the serving radio network control node the filtered list in a
6 RADIO LINK SETUP RESPONSE message.

1 8. The method of claim 4, further comprising:
2 performing the step of determining the allowed area(s) for the user equipment
3 unit at the drift radio network control node by consulting a table maintained at the drift
4 radio network control node.

1 9. The method of claim 3, further comprising:
2 performing the step of determining the allowed area(s) for the user equipment
3 unit at the serving radio network control node;
4 performing the step of preparing the filtered list of cells using the allowed
5 area(s) at the drift radio network control node.

1 10. The method of claim 9, further comprising:
2 transmitting to the drift radio network control node an identification of the target
3 cell and a list of allowed area(s) for the user equipment unit; and
4 the drift radio network control node transmitting to the serving radio network
5 control node the filtered list.

1 11. The method of claim 10, wherein the list of allowed area(s) comprises a list
2 of allowed network(s) expressed at least partially in terms of PLMN = MCC/MNC.

1 12. The method of claim 10, further comprising:
2 transmitting to the drift radio network control node the identification of the
3 target cell and the list of allowed area(s) for the user equipment unit in a RADIO LINK
4 SETUP REQUEST message;
5 transmitting to the serving radio network control node the filtered list in a
6 RADIO LINK SETUP RESPONSE message.

1 13. The method of claim 9, further comprising:

performing the step of determining the list of allowed area(s) for the user equipment unit at the serving radio network control node by consulting a table maintained at the serving radio network control node.

14. The method of claim 3, further comprising:
performing the step of determining the allowed area(s) for the user equipment unit at the serving radio network control node;
performing the step of preparing the filtered list of cells using the allowed area(s) at the serving radio network control node.

15. The method of claim 14, further comprising:
transmitting to the drift radio network control node an identification of the target cell for the user equipment unit; and
the drift radio network control node transmitting to the serving radio network control node a list of neighboring cells for the target cell.

16. The method of claim 15, further comprising:
transmitting to the drift radio network control node the identification of the target cell in a RADIO LINK SETUP REQUEST message;
transmitting to the serving radio network control node the list of neighboring cells for the target cell in a RADIO LINK SETUP RESPONSE message.

17. The method of claim 14, further comprising:
performing the step of determining the allowed area(s) for the user equipment unit at the serving radio network control node by consulting a table maintained at the serving radio network control node.

18. The method of claim 3, further comprising:
performing the step of determining the allowed area(s) for the user equipment unit at a core network;
performing the step of preparing the filtered list of cells using the allowed area(s) at the drift radio network control node.

1 19. The method of claim 18, further comprising determining the list of allowed
2 area(s) for the user equipment unit by consulting a table maintained at a core network
3 node.

1 20. The method of claim 18, wherein the step of determining the allowed area(s)
2 for the user equipment unit at a core network involves consulting a record in a home
3 location register (HLR) for the user equipment unit.

1 21. The method of claim 18, further comprising:
2 transmitting to the drift radio network control node an identification of the target
3 cell and a list of allowed area(s) for the user equipment unit; and
4 the drift radio network control node transmitting to the serving radio network
5 control node the filtered list.

1 22. The method of claim 21, wherein the list of allowed area(s) comprises a list
2 of allowed network(s) expressed at least partially in terms of PLMN = MCC/MNC.

1 23. The method of claim 21, further comprising:
2 transmitting to the drift radio network control node the identification of the
3 target cell and the list of allowed area(s) for the user equipment unit in a RADIO LINK
4 SETUP REQUEST message;
5 transmitting to the serving radio network control node the filtered list in a
6 RADIO LINK SETUP RESPONSE message.

1 24. The method of claim 3, further comprising:
2 performing the step of determining the allowed area(s) for the user equipment
3 unit at a core network;
4 performing the step of preparing the filtered list of cells using the allowed
5 area(s) at the serving radio network control node.

1 25. The method of claim 24, further comprising determining the list of allowed
2 area(s) for the user equipment unit by consulting a table maintained at a core network
3 node.

1 26. The method of claim 24, wherein the step of determining the allowed area(s)
2 for the user equipment unit at a core network involves consulting a record in a home
3 location register (HLR) for the user equipment unit.

1 27. The method of claim 24, further comprising:
2 transmitting to the drift radio network control node an identification of the target
3 cell for the user equipment unit; and
4 the drift radio network control node transmitting to the serving radio network
5 control node a list of neighboring cells for the target cell.

1 28. The method of claim 27, further comprising:
2 transmitting to the drift radio network control node the identification of the
3 target cell in a RADIO LINK SETUP REQUEST message;
4 transmitting to the serving radio network control node the list of neighboring
5 cells for the target cell in a RADIO LINK SETUP RESPONSE message.

1 29. The method of claim 1, wherein the serving radio network control node
2 determines that the target cell controlled by the drift radio network control node should
3 be prepared for handover with respect to the user equipment unit, and wherein the
4 serving radio network control node transmits to the user equipment unit the message
5 including the filtered list of cells.

1 30. The method of claim 1, further comprising transmitting to the user
2 equipment unit the filtered list of cells in a MEASUREMENT CONTROL message.

1 31. A radio access network comprising a serving radio network control node
2 and a drift radio network control node, wherein the serving radio network control node
3 determines that a target cell controlled by the drift radio network control node should be
4 prepared for handover with respect to a user equipment unit, the target cell being
5 neighbored by a set of neighboring cells, the set of neighboring cells including a first
6 subset of neighboring cells and a second subset of neighboring cells, a handover
7 involving the user equipment unit being permitted for a cell of the first subset but not
8 for a cell of the second subset; characterized in that:

the serving radio network control node transmits to the user equipment unit a message including a filtered list of cells, the filtered list of cells including the first subset but not the second subset.

32. The apparatus of claim 31, wherein the filtered list of cells comprises cells for whose channels the user equipment unit is to perform measurements.

33. The apparatus of claim 31, wherein the drift radio network control node determines the allowed area(s) for the user equipment unit at the drift radio network control node and prepares the filtered list of cells using the allowed area(s) at the drift radio network control node.

34. The apparatus of claim 33, wherein the serving radio network control node transmits to the drift radio network control node an identification of the target cell and an identification of the user equipment unit; and wherein the drift radio network control node transmits to the serving radio network control node the filtered list.

35. The apparatus of claim 34, wherein the identification of the user equipment unit is the International Mobile Subscriber Identifier (IMSI) of the user equipment unit.

36. The apparatus of claim 34, wherein the serving radio network control node transmits to the drift radio network control node an identification of the target cell and an identification of the user equipment unit in a RADIO LINK SETUP REQUEST message; and wherein the drift radio network control node transmits to the serving radio network control node the filtered list in a RADIO LINK SETUP RESPONSE message.

37. The apparatus of claim 33, wherein the drift radio network control node determines the allowed area(s) for the user equipment unit by consulting a table maintained at the drift radio network control node.

38. The apparatus of claim 31, wherein the serving radio network control node determines the allowed area(s) for the user equipment unit at the serving radio network control node and the drift radio network control node prepares the filtered list of cells using the allowed area(s).

1 39. The apparatus of claim 38, wherein the serving radio network control node
2 transmits to the drift radio network control node an identification of the target cell and a
3 list of allowed area(s) for the user equipment unit; and wherein the drift radio network
4 control node transmits to the serving radio network control node the filtered list.

1 40. The apparatus of claim 39, wherein the list of allowed area(s) comprises a
2 list of allowed network(s) expressed at least partially in terms of PLMN = MCC/MNC.

1 41. The apparatus of claim 39, wherein the serving radio network control node
2 transmits to the drift radio network control node the identification of the target cell and
3 the list of allowed area(s) for the user equipment unit in a RADIO LINK SETUP
4 REQUEST message, and wherein the drift radio network control node transmits to the
5 serving radio network control node the filtered list in a RADIO LINK SETUP
6 RESPONSE message.

1 42. The apparatus of claim 38, wherein the serving radio network control node
2 determines the list of allowed area(s) for the user equipment unit at the serving radio
3 network control node by consulting a table maintained at the serving radio network
4 control node.

1 43. The apparatus of claim 31, wherein the serving radio network control node
2 determines the allowed area(s) for the user equipment unit and prepares the filtered list
3 of cells using the allowed area(s).

1 44. The apparatus of claim 43, wherein the serving radio network control node
2 transmits to the drift radio network control node an identification of the target cell for
3 the user equipment unit; and wherein the drift radio network control node transmits to
4 the serving radio network control node a list of neighboring cells for the target cell.

1 45. The apparatus of claim 44, wherein the serving radio network control node
2 transmits to the drift radio network control node the identification of the target cell in a
3 RADIO LINK SETUP REQUEST message; and wherein the drift radio network
4 control node transmits to the serving radio network control node the list of neighboring
5 cells for the target cell in a RADIO LINK SETUP RESPONSE message.

1 46. The apparatus of claim 43, wherein the serving radio network control node
2 determines the allowed area(s) for the user equipment unit by consulting a table
3 maintained at the serving radio network control node.

1 47. The apparatus of claim 31, wherein the serving radio network control node
2 receives from a core network a determination of the allowed area(s) for the user
3 equipment unit at a core network; and wherein the drift radio network control node
4 prepares the filtered list of cells using the allowed area(s).

1 48. The apparatus of claim 47, wherein the core network determines the list of
2 allowed area(s) for the user equipment unit by consulting a table maintained at a core
3 network node.

1 49. The apparatus of claim 47, wherein the core network determines the allowed
2 area(s) for the user equipment unit by consulting a record in a home location register
3 (HLR) for the user equipment unit.

1 50. The apparatus of claim 47, wherein the serving radio network control node
2 transmits to the drift radio network control node an identification of the target cell and a
3 list of allowed area(s) for the user equipment unit; and wherein the drift radio network
4 control node transmits to the serving radio network control node the filtered list.

1 51. The apparatus of claim 50, wherein the list of allowed area(s) comprises a
2 list of allowed network(s) expressed at least partially in terms of PLMN = MCC/MNC.

1 52. The apparatus of claim 50, wherein the serving radio network control node
2 transmits to the drift radio network control node the identification of the target cell and
3 the list of allowed area(s) for the user equipment unit in a RADIO LINK SETUP
4 REQUEST message; and wherein the drift radio network control node transmits to the
5 serving radio network control node the filtered list in a RADIO LINK SETUP
6 RESPONSE message.

1 53. The apparatus of claim 31, wherein the serving radio network control node
2 receives from a core network node a determination of the allowed area(s) for the user

equipment unit; and wherein the serving radio network control node prepares the filtered list of cells using the allowed area(s).

54. The apparatus of claim 53, wherein the core network makes the determination of the list of allowed area(s) for the user equipment unit by consulting a table maintained at a core network node.

55. The apparatus of claim 53, wherein the core network makes the determination of the list of allowed area(s) for the user equipment unit by consulting a record in a home location register (HLR) for the user equipment unit.

56. The apparatus of claim 53, wherein the serving radio network control node transmits to the drift radio network control node an identification of the target cell for the user equipment unit; and wherein the drift radio network control node transmits to the serving radio network control node a list of neighboring cells for the target cell.

57. The apparatus of claim 56, wherein the serving radio network control node transmits to the drift radio network control node the identification of the target cell in a RADIO LINK SETUP REQUEST message; and wherein the drift radio network control node transmits to the serving radio network control node the list of neighboring cells for the target cell in a RADIO LINK SETUP RESPONSE message.

58. The apparatus of claim 31, wherein the serving radio network control node determines that the target cell controlled by the drift radio network control node should be prepared for handover with respect to the user equipment unit, and wherein the serving radio network control node transmits to the user equipment unit the message including the filtered list of cells.